Montana Laboratory Sentinel

Updates from the MT Laboratory Services Bureau MONTANA **http://healthlab.hhs.mt.gov/ 04/07/10**

Could This Isolate be *Bacillus anthracis*? What's Next?

Montana Public Health Laboratory (MTPHL) recently received an isolate from a clinical laboratory for identification. The requisition received with the isolate listed the source as BLOOD CULTURE; no additional information characterizing the isolate was provided on the requisition or by telephone. **Testing revealed a non-hemolytic, non-motile, catalase positive, large gram positive rod with blunt ends. ALERT – could this be *Bacillus anthracis*?** This is an opportunity to review protocols for referring isolates to MTPHL or other laboratories for identification and/or confirmation of organisms suspect of bioterrorism agents.

We all need to be vigilant of possible bioterrorism agents (*Bacillus* spp., *Yersinia* spp., *Brucella* spp., *Burkholderia* spp., and *Francisella tularensis)*. These "Select Agents" could be "weaponized" by terrorists and disseminated. However, in a rural setting such as Montana, **people contract these naturally occurring bacteria while in contact with domestic or wild animals**. The clinical laboratory would be the first to detect a cluster of cases of an organism. As a "Sentinel Laboratory" you would sound the alarm by contacting the Reference Laboratory (MTPHL).

Clinical laboratories performing microbiology testing are classified as Sentinel Laboratories by the Laboratory Response Network (LRN) and Centers for Disease Control and Prevention (CDC). State Public Health Laboratories are classified as Reference Laboratories and are provided with confirmatory testing methods for isolates referred by the Sentinel Laboratories.

The microbiologists at MTPHL ***must be alerted by phone (800-821-7284) AND alerted with a notation on the requisition form*** submitted with the culture and/or isolate. Basic information such as "gram positive rod, non-hemolytic, catalase positive, non-motile, and *B. anthracis* suspect" noted on the requisition form will alert the microbiologist to take extra safety precautions AND expedite identification.

Attached is a flow chart which will help your laboratory to "Rule Out or Refer" isolates to MTPHL. In the event you cannot rule-out *Bacillus anthracis*, ***please call MTPHL*** to discuss further actions and precautions.

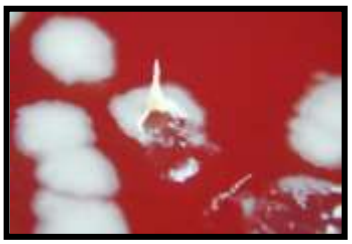
A working group which included the CDC and the American Society for Microbiology (ASM) developed protocols for clinical laboratories. ***Every Sentinel Laboratory should incorporate the guidelines in its procedure manuals: "Sentinel Level Clinical Microbiology Laboratory Guidelines"*** (includes Agents of Bioterrorism, Packaging and Shipping, and a BT Readiness Plan)
http://www.asm.org/index.php?option=com_content&view=article&id=6342&Itemid=639

The attached chart and images of *Bacillus* spp. are found on pages 12-19 of the *Bacillus anthracis* protocol within the Sentinel Laboratory Guidelines:
http://www.asm.org/images/pdf/bacillusanthracisprotocol.pdf.

Additional information on the "Select Agents of Bioterrorism" is found at: http://www.bt.cdc.gov/hazards-specific.asp

BT Wet Workshop in Helena – Friday, July 30, 2010

The materials and demonstrations are designed to help clinical microbiologists recognize and "Rule Out or Refer" *Bacillus* spp., *Yersinia* spp., *Brucella* spp., *Burkholderia* spp., *Francisella tularensis*) and similar organisms. Registration information will follow. Kathy Martinka, Bioterrorism Laboratory Preparedness Coordinator kmartinka@mt.gov 406-444-0944



Key Characteristics of *Bacillus anthracis*

- ✓ Rapid growing
- ✓ Non-hemolytic
- ✓ Large gram positive rod with blunt ends
- ✓ Catalase positive
- ✓ Non-motile
- ✓ May be tenacious

Call
MT Public Health Laboratory
800-821-7284

MT Communicable Disease Update Week 12 Ending 03/27/10

This newsletter is produced by the Montana Communicable Disease Epidemiology Program.
Questions regarding its content should be directed to 406.444.0273 (24/7/365).
http://cdepi.hhs.mt.gov

DISEASE INFORMATION

Summary – Week 12 – Ending 03/27/10 – Disease reports received at DPHHS during the reporting period March 21-27, 2010 included the following:

- Vaccine Preventable Diseases: Invasive Streptococcus pneumonia (1), Varicella (4),
- Enteric Diseases: Campylobacteriosis (4), Cryptosporidiosis (2), Giardiasis (9), Escherichia coli O157:H7 (STEC) (2), non-O157 STEC (3), Salmonellosis (3), Shigellosis (1)

INFLUENZA

Montana – Activity level in Montana for week 12 is NO ACTIVITY. IMPORTANT**! Interpret positive rapid influenza tests with caution at this time**. A positive screening test result is most likely to be truly positive during periods of peak influenza activity in the population tested. A positive screening test result is most likely to be falsely positive during periods of low influenza activity in the population tested, including early and late in the influenza season. Per IDSA Guidelines, a confirmatory test such as PCR or viral culture should be considered **(**http://www.journals.uchicago.edu/doi/pdf/10.1086/598513**)**

Current information on influenza testing by the Montana Public Health Laboratory can be found at http://www.dphhs.mt.gov/PHSD/Lab/environ-lab-index.shtml

NEW! Influenza in Pregnancy - Attached is a publication from the MMWR about H1N1 infection among pregnant women in NYC that identifies both increased risk for hospitalization and ICU admission compared to non-pregnant women, as well as several missed opportunities for prevention. Current recommendations for treatment and prevention of influenza in pregnant women are available at http://www.cdc.gov/H1N1flu/pregnancy/antiviral_messages.htm

United States - During week 12 (03/27/10), influenza activity remained at approximately the same levels as last week. **(**http://www.cdc.gov/flu/weekly/usmap.htm**)**

DIARRHEAL DISEASE AND FOOD RECALLS:

Hydrolyzed Vegetable Protein Product Recalls - The U.S. Food and Drug Administration continues to investigate findings of Salmonella Tennessee in hydrolyzed vegetable protein (HVP) manufactured by Basic Food Flavors, Inc., in Las Vegas, NV. HVP is a flavor enhancer used in a wide variety of processed food products, such as soups, sauces, chilis, stews, hot dogs, gravies, seasoned snack foods, dips, and dressings. At this time, no illnesses associated with this contamination have been reported to the FDA; however, multiple food products are involved in this recall.

Updates to the recall list can be found at: http://www.fda.gov/Safety/Recalls/MajorProductRecalls/HVP/default.htm

RABIES:

NEW! Animal Bites to Humans on the Increase - As spring progresses into summer, human and domestic pet interaction with wildlife increases. Though it may be tempting to handle or assist distressed wildlife, abnormal wildlife behavior in species like bats, skunks, and foxes (e.g., nocturnal animal out in the daytime, lethargic, or aggressive) may be a sign of rabies infection. Rabies infections are sometimes detected in MT wildlife and transmission to domestic pets and humans through the saliva of an infected animal is possible. Report all animal bites or possible rabies exposures to the local health department.

- As of April 2, 2010, there were no reports of rabies positive animals in Montana for 2010.

For more information about rabies, and a summary of the current recommendations for rabies postexposure prophylaxis (PEP) visit: http://www.cdc.gov/rabies/index.html Continued on Page 2

NEW! HANTAVIRUS

Hantavirus is transmitted to humans through exposure to infected rodent tissues or excrement, including dried feces. Hantaviruses can cause a rare but deadly disease called hantavirus pulmonary syndrome (HPS). People get HPS when they breath in hantaviruses. This can happen when rodent urine and droppings that contain a hantavirus are stirred up into the air. People can also become infected by touching their eyes, nose, or mouth after they touch rodent urine, droppings, or nesting materials that contain the virus. HPS may also be transmitted through a mouse or rat bite. Activities that can put people at risk for HPS include: improperly cleaning up mouse and rat urine, droppings, and nests, cleaning a shed or cabin that has been closed for some time, and working in areas where mice and rats may live (such as barns). To prevent exposure to hantaviruses, rodents should be excluded from the home place, and the following **precautions should be used when cleaning areas where rodents may reside**:

- Wear rubber or plastic gloves when cleaning rodent infested areas
- Spray urine and droppings with a disinfectant or a mixture of bleach and water thoroughly soaking the area, and let stand for 5 minutes
- Use a paper towel to wipe up the urine or droppings and discard in the garbage
- Mop or sponge the area with a disinfectant or bleach solution
- Wash gloved hands with soap and water or spray a disinfectant or bleach solution on gloves before taking them off
- Wash hands with soap and warm water after taking off your gloves.

For more information about hantaviruses, visit**:** http://www.cdc.gov/ncidod/diseases/hanta/hps/index.htm

NEW! HEPATITIS Information

The National Training Center for Integrating Hepatitis into HIV/STD Prevention Services has two new documents: **(**www.KnowHepatitis.org<http://links.govdelivery.com:80/track?type=click&enid=bWFpbGluZ2lkPTc2MTk3OCZtZXNzYWdlaWQ9UFJELUJVTC03NjE5NzgmZGF0YWJhc2VpZD0xMDAxJnNlcmlhbD0xMjE1NzI2NjA1JmVtYWlsaWQ9YmJhcm5hcmRAbXQuZ292JnVzZXJpZD1iYmFybmFyZEBtdC5nb3YmZXh0cmE9JiYm&&&100&&&http://www.knowhepatitis.org/>)

1) ABC's of Hepatitis - Information for the Front Line Worker

by Laura Bachmann, MD, MPH - Associate Professor of Medicine, Wake Forest University
http://www.knowhepatitis.org/abcstraining<http://links.govdelivery.com:80/track?type=click&enid=bWFpbGluZ2lkPTc2MTk3OCZtZXNzYWdlaWQ9UFJELUJVTC03NjE5NzgmZGF0YWJhc2VpZD0xMDAxJnNlcmlhbD0xMjE1NzI2NjA1JmVtYWlsaWQ9YmJhcm5hcmRAbXQuZ292JnVzZXJpZD1iYmFybmFyZEBtdC5nb3YmZXh0cmE9JiYm&&&101&&&http://www.knowhepatitis.org/abcstrainingprequestions**>**

2) IOM Report: A National Strategy for Prevention and Control of Hepatitis B and C

by John W. Ward, MD – Director of the Division of Viral Hepatitis, CDC
http://www.knowhepatitis.org/iom<http://links.govdelivery.com:80/track?type=click&enid=bWFpbGluZ2lkPTc2MTk3OCZtZXNzYWdlaWQ9UFJELUJVTC03NjE5NzgmZGF0YWJhc2VpZD0xMDAxJnNlcmlhbD0xMjE1NzI2NjA1JmVtYWlsaWQ9YmJhcm5hcmRAbXQuZ292JnVzZXJpZD1iYmFybmFyZEBtdC5nb3YmZXh0cmE9JiYm&&&102&&&http://www.knowhepatitis.org/iomprequestions**>**

NEW! Communicable Disease Summary: A Guide for Schools

The Communicable Disease Summary: A Guide for Schools is will be mailed to all Montana K-12 schools, local health departments and infection preventionists soon. The guide is available at:
http://www.dphhs.mt.gov/PHSD/epidemiology/schools.shtml